

ELECTROCHEMICAL CELLRelated Applications

This application is a continuation of copending U.S. Application No.

now US Patent No. 6,526,110

5 09/709,968, filed November 10, 2000, which is a continuation of copending U.S. Application No. 09/314,251, filed May 19, 1999, which issued as U.S. Patent No. 6,174,420 on January 16, 2001, which is a continuation of copending U.S. Application No. 09/068,828, filed on May 15, 1998, and of copending U.S. Application No. 08/852,804, filed on May 7, 1997, which issued as U.S. Patent No. 5,942,102 on August 24, 1999, the contents of which are incorporated herein by reference in their entirety.

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Background of the Invention

This invention relates to an electrochemical cell for determining the concentration of an analyte in a carrier.

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The invention herein described is an improvement in or modification of the invention described in our co-pending U.S. Application No. 08/981,385, entitled ELECTROCHEMICAL CELL, filed on December 18, 1997, the contents of which are incorporated herein by reference in its entirety.

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The invention will herein be described with particular reference to a biosensor adapted to measure the concentration of glucose in blood, but it will be understood not to be limited to that particular use and is applicable to other analytic determinations.

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It is known to measure the concentration of a component to be analysed in an aqueous liquid sample by placing the sample into a reaction zone in an electrochemical cell comprising two electrodes having an impedance which renders them suitable for amperometric measurement. The component to be analysed is allowed to react directly or indirectly with a redox reagent whereby to form an oxidisable (or reducible) substance in an amount corresponding to the concentration of the component to be analysed. The quantity of the oxidisable (or reducible) substance present is then estimated electrochemically. Generally this method requires sufficient separation of the electrodes so that electrolysis products at one electrode cannot reach the other